

THE COUNCIL OF ORGANIZATIONAL REPRESENTATIVES  
ON NATIONAL ISSUES CONCERNING PEOPLE WHO ARE DEAF OR HARD OF HEARING

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November 15, 1999

Ms. Magalie R. Salas  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., TW-A325  
Washington, D.C. 20554

Re: In the Matter of Closed Captioning Requirements for  
Digital Television Receivers, ET Dkt. No. 99-254

Dear Ms. Salas:

Enclosed please find one original and four copies of reply comments filed by the Council on Organizational Representatives in the above captioned proceeding.

Sincerely,

Karen Peltz Strauss  
Legislative Consultant

Enclosures

cc: Neal L. McNeil (diskette)  
ITS

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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
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In the Matter of

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ET Docket No. 99-254

**REPLY COMMENTS OF  
THE COUNCIL OF ORGANIZATIONAL REPRESENTATIVES  
ON NATIONAL ISSUES CONCERNING  
PEOPLE WHO ARE DEAF OR HARD OF HEARING**

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Co-Chairs of COR

November 15, 1999

## SUMMARY

The Council of Organizational Representatives on National Issues Concerning People who are Deaf or Hard of Hearing (COR) urges the Commission to adopt a final standard for the receipt and display of closed captions that will take full advantage of the many attributes that digital television has to offer. Just as viewers will be able to control audio features on digital equipment, so too should they be able to control the visual features of captions, including the font, size, color, background, and screen position of these captions. The failure to adopt a comprehensive standard at this time will result in costly and burdensome retrofits of digital television equipment at a later time. Although the creation of a reasonable schedule for introducing the advanced features of digital television captioning may be appropriate, the Commission should not wait until the end of the transition period from analog to digital programming to first introduce any of these features, given that such period may be as many as fifteen years.

Several of the industry parties have raised issues in this proceeding at what appears to be the eleventh hour. The Commission should not further delay implementation of its digital standard merely because these parties did not raise these issues during the ongoing industry forums that took place over most of this past decade. Moreover, passage of the Television Decoder Circuitry Act in 1990 long ago put these parties on notice of the need to adapt their equipment for the receipt and display of closed captions. The Commission should not delay any further; its new standard should become effective one year after its adoption, so that there is a seamless transition in the provision of captions as programming shifts from analog to digital.

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**REPLY COMMENTS OF  
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ON NATIONAL ISSUES CONCERNING  
PEOPLE WHO ARE DEAF OR HARD OF HEARING**

**I. Introduction**

The Council of Organizational Representatives on National Issues Concerning People who are Deaf or Hard of Hearing (COR) submits these reply comments in the above captioned proceeding on closed captioning by digital television receivers.<sup>1</sup> COR is a coalition of national organizations that are committed to improving the lives of individuals who are deaf or hard of hearing. Constituencies of COR organizations provide a variety of services, including technological and telecommunications services, educational programs, support groups and self-help programs, medical, audiological, and speech-language pathology assessment and

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<sup>1</sup> The following members of COR support these comments: Alexander Graham Bell Association, American Academy of Audiology, American Society for Deaf Children, American Speech-Language-Hearing Association, League for the Hard of Hearing, National Association of the Deaf, National Court Reporters Association, Registry of Interpreters for the Deaf, Self Help for Hard of Hearing People, Inc., and Telecommunications for the Deaf, Inc.

rehabilitation services, information on assistive devices and technology, and general information on other services for deaf and hard of hearing consumers. Among other things, COR serves as a bridge among interested organizations, the general public, and the community of people with disabilities on matters concerning deaf and hard of hearing individuals. COR has been an active participant in virtually all of the FCC's earlier proceedings on closed captioning.

The digital television standard established by the FCC must ensure that the millions of individuals who rely on captioning will have the opportunity to fully benefit from the advances of digital technologies. Toward this end, we urge the Commission to adopt EIA-708-B in its entirety. Only this action will enable viewers to adapt caption displays to their individual needs.

**II. The Digital Television Standard Adopted by the Commission Should Include the Advanced Display Features of EIA-708-B.**

COR agrees with the many consumers who have urged the Commission to adopt a standard which that will enable television viewers to fully control the font, size, color, background, spacing, and screen position of captions. Comments of National Association of the Deaf/Consumer Action Network (NAD/CAN) at 2; Comments of Self Help for Hard of Hearing People (SHHH) at 2; Comments of Telecommunications for the Deaf, Inc. (TDI) at 3; Comments of Alexander Graham Bell Association (AG Bell) at 2. As stated by SHHH, where the audio features of television equipment enable viewers to control audio features (such as tone, volume, language or language level), so too should the caption features of that equipment enable viewers to adjust various attributes of the captions. Comments of SHHH at 2. Anything short of this would violate the intent and purpose of the Television Decoder Circuitry Act and Section 305 of the Telecommunications Act of 1996, two Congressional directives which require television to be fully accessible to individuals who use closed captions.

Several of the industry commenters to this proceeding request that the FCC not require the advanced features of EIA-708 at all (Comments of Consumer Electronics Manufacturers Association (CEMA) at 5) or at least not until the transition from analog to digital programming is complete. Comments of National Association of Broadcasters (NAB) at 2. However, these parties have been fully aware of the need for full accessibility in DTV equipment for quite some time. More than six years have passed since industry working groups first initiated discussions to develop an appropriate standard for digital television equipment. And the first of the 708 standards, EIA-708-A, was approved by many, if not all of the industry parties to this proceeding, as many as two years ago. These entities can not now feign surprise that there are proposals on the table which reflect consumer desires to adopt this standard in its entirety.

The failure to adopt a standard which incorporates the advanced features contained in EIA-708, and most specifically those that relate to pen sizes, fonts, colors, and coverage of standard services, could serve to be extremely detrimental for both consumers and the industry. As noted in the comments submitted by the NAD/CAN, access is much more easily accomplished if equipment is initially designed with access in mind, rather than retrofitted to incorporate such access at a later date. Comments of NAD/CAN at 12. Indeed, this universal design doctrine – i.e., the doctrine of designing with access in mind – is emphasized in the Commission’s recently released rules on Section 255 of the Telecommunications Act, and should provide the foundation for the Commission’s final standard for digital captioning. Put simply, requiring a lesser standard now will only result in greater costs, and consequently even greater opposition to a more comprehensive standard later, when manufacturers may need to retrofit their equipment to incorporate advanced captioning features.

As noted in the comments submitted by the NAD/CAN and TDI, digital technologies promise to open new avenues of accessibility for closed caption users. The ability to control the size of captions will remove existing obstacles for individuals with low vision. The ability to control both foreground and background colors will enable viewers to maximize the visibility of captions in varied program settings. Similarly, the ability to change caption fonts will both provide a benefit for persons who have vision disabilities and will enhance viewing legibility for all caption users.

Unfortunately, the standard proposed by the FCC – Section 9 of EIA-708 – will not accomplish any of the above goals. The FCC’s proposal to mandate only the most basic of features would deny caption viewers access to most of the extraordinary benefits that a shift to digital technologies has to offer. One pen size, one font, and one background color . . . that is what is available now, and that is what would be available were Section 9 adopted as the new standard. Certainly, as the rest of America comes to enjoy the depth and breadth of features that digital television has to offer, the Commission can promise more to individuals who will be accessing such television with closed captions.

Worse still, as proposed, Section 9 of EIA-708 would only require decoders to be capable of decoding and processing data for one captioning service. See Comments of AG Bell at 3; Comments of NAD/CAN at 6. Not only is this not a step into the future; it is actually a step backwards. Even the Commission’s analog standard requires decoders to be capable of decoding captioning data for two concurrent captioning services.<sup>2</sup> Moreover, many television receivers already offer up to four caption channels. At a minimum, decoders designed for the receipt of

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<sup>2</sup> 47 C.F.R. §15.119(c).



digital programming should be capable of decoding all of the standard services contained in EIA-708, so that consumers who are deaf and hard of hearing have equal access to the information transmitted by these services. See also Comments of WGBH Educational Foundation at 6.

The possible uses for the advanced features of EIA-708 are limitless. For example, as noted by TDI, at present, many consumers are confronted with having to choose between reading captions or reading emergency “crawls” that appear behind captions. Comments of TDI at 5. The ability to alter the size and placement of captions can eliminate the difficulties confronted by caption viewers who now have to choose between which text to keep on the screen. Similarly, caption viewers wish to be able to read captions on devices that contain a picture within a picture (PIP). The high definition that is characteristic of digital technologies will make even small captions readable on these small screen displays.

The NAB urges the Commission not to require captions with any of the advanced display features of EIA-708 until the completion of the DTV transition. Comments of NAB at 3. However, the NAB does not make clear just when that period of transition will be complete. Although broadcasters are directed to return their analog licenses in 2006, they are permitted to retain those licenses for a longer period of time if the penetration rate for digital television does not reach eight-five percent of the American public by that time. Given the fact that a significant number of Americans still remain unaware about the switch to digital television, it would not be unlikely were the full transition to digital programming to take place over a much longer period, for example, ten to fifteen years. It makes little sense to deny consumers the many advantages of digital caption technologies for so long a period. Individuals who depend on captions to receive their information from television should not be relegated to second class status, as other television

viewers come to enjoy the exciting and diverse benefits of these technologies at a much earlier time.<sup>3</sup> At the same time, consumers may not be adverse to working with the industry to design a phase-in of these advanced features over the next two to four years, so long as some minimum requirements to receive and display closed captioning on digital devices are in place within one year.

### III. Access to Captions During the Transition from Analog to Digital Programming Should be Seamless.

COR agrees with the FCC, as well as other consumers who have contributed comments in this proceeding, on the need for ensuring the continued availability of closed captioning during the transition period from analog to digital programming. Accordingly, we support the FCC's proposal to require that DTV receivers be capable of operating in a dual mode that receives and displays captions in both analog and digital formats. Similarly, we support the Commission's proposal that DTV converter boxes and tuners provide for the display of both analog and digitally encoded caption information. NPRM at ¶12. Requiring all such devices to be capable of processing closed captions will eliminate confusion that might otherwise exist with respect to which equipment is accessible and which is not.

CEMA attempts to argue that the mandate in the TDCA to "to ensure that closed-

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<sup>3</sup> The National Cable Television Association (NCTA) and Thomson Consumer Electronics, Inc. complain of the costs of requiring the more advanced features of digital technologies. Comments of NCTA at 3; Comments of Thomson at 7. But it is highly unlikely that captioning costs will "retard" the development of digital programming (Comments of NCTA at 3), given the Congressional mandate to provide such programming, and given the relatively minor costs of providing these features, when compared to the overall costs involved in shifting to this new technology. Neither NCTA nor Thomson offer any evidence to sustain their concerns; nor has any captioning agency come forward to suggest that the costs of providing advanced caption services will be any greater than the costs of providing analog caption services.

captioning service continues to be available to consumers” as new video technology is developed, does not apply to set top boxes or DTV tuners. Comments of CEMA at 10. Incredulously, CEMA asserts that because these devices cannot actually display closed captions (but rather can only receive captions), they do not fall within the mandate to pass through those captions. Contrary to CEMA’s assertions, there is nothing in the legislative history of the TDCA to suggest that Congress intended to limit application of that law only to television “sets” that can both receive and display captions. The very inclusion of a directive to ensure the continued availability of closed captions as new video technologies are developed, evidences the intent to mandate caption capabilities in *all* devices capable of receiving television programming. The FCC has already acknowledged as much through its decision to require decoder capabilities in television circuitry housed in computers.<sup>4</sup> Even Thomson Consumer Electronics acknowledges that DTV tuners and converter boxes will be “the means by which most consumers receive DTV services when not purchasing a display-equipped DTV receiver.” Comments of Thomson at 11. The prohibitive cost of digital television sets and the gradual transition from analog to digital programming will mean that most Americans will use these adjunct devices long before they purchase digital television sets. To not require access through these devices would eliminate captions for millions of Americans and defeat the very purpose of both TDCA and Section 305 of the Telecommunications Act of 1996.

CEMA also raises concerns about the performance of analog television equipment already in the possession of consumers, when such equipment is combined with equipment designed to

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<sup>4</sup> *Closed Captioning Requirements for Computer Systems Used as Television Receivers*, FCC Public Notice (March 22, 1995).

receive digital programming. CEMA explains that a consumer presently may have a television set with a 4:3 display screen that is hooked up to a tuner which receives captions for a 16:9 digital display. Comments of CEMA at 8-9. According to CEMA, this would make the presentation of the captions (designed for a wide screen) unintelligible to the consumer. COR urges that whatever technical solution is arrived at for handling this problem, flexibility in the caption display be provided (whether automatically detected by the equipment or manually determined by the consumer) so that such display is fully legible to the consumer during this transition period.

General Instrument (GI) raises concerns about the existing base of closed captioning equipment used by the cable industry to process 608 caption data. They claim that because digital cable converters cannot be upgraded to accommodate the A/53 format, individuals now using such converters to decode captions on cable programming for analog TV sets will be left with equipment that no longer processes such captioning data. Comments of GI at 6. While, at present, COR is not equipped to propose technical standards to process captions transmitted through *both* digital broadcasting and digital cable, we are very concerned about the problems raised by these compatibility issues. We urge the Commission to ensure that the methods prescribed to handle the receipt and display of caption data over both cable and broadcasting, be ones that enable consumers to fully enjoy captions during the transition stage, at affordable costs to such consumers. Toward this end, the FCC should seek solutions that do away with the need for caption viewers to purchase equipment over and above that needed by the general public to enjoy digital television. Indeed, this was the very purpose of the TDCA, i.e., to eliminate the need for purchasing expensive and burdensome add-on devices by requiring decoder chips to be built right into television devices. A standard that ensures backward compatibility with existing set top

boxes and cable-ready digital receivers is critical to ensuring a seamless transition to digital television programming for the millions of deaf and hard of hearing individuals who benefit from closed captioning.

Finally, the NAB raises concerns about what would happen were equipment manufacturers permitted to manufacture digital set top boxes that decode analog captions contained in DTV television signals. Comments of NAB at 5. Specifically, the NAB claims that “if this is done, the signal sent from the set-top box’s NTSC output to the analog television set would be ‘open captioned’.” If such program were recorded on a VCR, the NAB claims, the visible captions would be burned onto the videotape. Conversely, if the program were recorded without the visible captions, it could never again be viewed with captions (because the digital set top box had not passed through the analog captions to the analog receiver).

COR is equally concerned that digital set top receivers or tuners that offer analog video output be required to reinsert 608 data in its entirety into Line 21 of the vertical blanking interval. Caption data received by a device with a traditional NTSC output should be made available to any other NTSC device, including VCRs, that may expect such 608 data. While consumers would not be adverse to having the *choice* of “burning” captions permanently onto a videotape, this should not happen automatically, without an option to the consumer. Oftentimes family members or friends share tapes; some of these individuals may choose to use captions, and some may not.<sup>5</sup>

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<sup>5</sup> The NAB also argues that even after the transition to DTV is completed, broadcasters should not be required to re-caption existing programs that already contain captions in the EIA-608 format in order to provide EIA-708 captioning features. Comments of NAB at 3 n.7. COR agrees that re-captioning thousands of hours of programming would be an inefficient use of resources. So long as 608 caption data is “upconverted” to the digital 708 format, caption data will be presented in the digital bitstream to either an analog (608) or digital (708) caption decoder, and consumers will be able to continue enjoying programs that have already been

#### IV. Smaller Television Displays Will be Capable of Legibly Displaying Closed Captions

COR agrees with the many consumers that have raised the need to reassess application of the thirteen inch threshold for decoders in television equipment. See e.g., Comments of AG Bell at 3-4. Congress' initial decision to limit the application of its decoder circuitry mandate to devices that have screens thirteen inches or greater was based in large part on the existing technology at the time that the TDCA was enacted. As TDI notes, the improved resolution of DTV, combined with the ability to alter caption sizes, "renders obsolete the historical 13 inch threshold." Comments of TDI at 8. Even if the Commission determines that it does not possess sufficient authority to alter this threshold at this time, at a minimum, it should not adopt a standard that is any greater than the thirteen inch diagonal. Although this standard will result in a digital monitor that is smaller than that of a thirteen inch analog monitor, the high resolution of such televisions, and the intent of Congress to make captions universally available, argue against a threshold that further reduces the accessibility of television devices.

#### V. Effective Date

We agree with the FCC and other consumers commenting in this proceeding that the Commission's rules governing DTV captions and receivers should become effective one year after their adoption. There has been significant notice to both manufacturers and video programming providers on the need to incorporate captioning access in the digital environment for quite some time. The mandates under TDCA have been in place since 1990 (effective as of 1993), and industry efforts to produce a compatible standard for digital programming have been underway

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captioned (although admittedly without the advanced digital features). It is COR's understanding that technology already exists to convert existing captioned programming to either type of decoder.

for several years. It should come as no surprise to manufacturers and video programming providers that consumers who rely on captions wish to enter the age of digital programming at the same time as the rest of the American public.

Most importantly, under the Commission's new captioning mandates, digital programming will continue to fall into the category of "pre-rule" programming until such time that the Commission finalizes its digital captioning standard. Because the mandates for captioning such programming are significantly less than the mandates for new programming – 75% in ten years versus 100% in eight years – the longer the FCC takes to finalize its digital standard, the longer consumers will continue to lose access to considerable amounts of television programming. For this reason, the Commission should do whatever is necessary to expedite the completion of this proceeding. In addition, should the Commission ultimately decide that it is appropriate to phase in the more advanced features of digital captioning over a period of years, it should clarify that digital programming will fall under the "new" programming category *at the start*, and not at the completion of that phase-in period.

#### VI. Additional Design Standards Should be Incorporated

COR agrees with other consumers who have commented in this proceeding that the introduction of digital technology offers the opportunity to rectify prior problems in the design of television decoder circuitry. Accordingly, we support the following design modifications:

- A default mode, which maintains the display of captions on all programming should be available to consumers. This will eliminate the need to continually re-activate captions each time the television is turned on, or a channel is changed.
- Consumers should be able to use captions whether or not the mute feature is activated. COR has been informed that some television sets will only display captions when the mute feature is selected, making it more difficult for hearing and deaf family members and friends to enjoy television with one another. The Commission should rectify this in the instant proceeding.

- Consumers should be able to easily and quickly access closed captions through a button on the remote control. This will eliminate the frustrations commonly experienced by consumers who are unfamiliar with the exhaustive menu options that must be navigated to access captions.

## VII. Conclusion

The shift to digital television has been described as “the greatest transformation in television’s history . . . It’s like the difference between a one-man band and a symphony.”<sup>6</sup> Indeed, digital television can transmit up to six times more data than conventional television signals, at least twice the picture resolution, and several discrete channels of CD-quality audio. Americans have been told that the change to digital television will be akin – or even greater than – the change from black and white television to programming in color. It is incumbent upon the FCC to ensure that consumers who rely on captions share equally in the benefits of this marvelous new technology.

We implore the Commission not to make the mistake of adopting a standard that will deny the very advantages that digital technology has to offer to caption viewers. Toward this end, we urge the Commission to adopt the EIA-708-B standard in its entirety. We remain committed to working with the FCC on solutions that will ensure that all Americans, including Americans who

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<sup>6</sup> “Charting the Digital Broadcasting Future,” Final Report of the Advisory Committee on Public Interest Obligations of Digital Television Broadcasters (Wash. D.C., December 18, 1998), quoting Vice President Al Gore, at 1

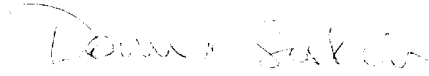


are deaf and hard of hearing, can fully partake in the benefits of the digital revolution.

Respectfully Submitted,



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